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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,107	07/31/2006	Ken'ichi Kasazumi	28951.1182	4328
53067 7590 01/06/2009 STEP TOE & JOHNSON LLP 1330 CONNECTICUT AVE., NW WASHINGTON, DC 20036				
EXAMINER AMARI, ALESSANDRO V				
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/588,107

Applicant(s)

KASAZUMI ET AL.

Examiner

ALESSANDRO AMARI

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) 9, 10 and 12-18 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-8 and 11 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 31 July 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/003)
Paper No(s)/Mail Date 10/24/06; 6/19/07; 11/26/07
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Drawings

1. Figures 13 and 14 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: On page 4, second paragraph of the specification references Figure 15 whereas it appears that it should be referred to as "Figure 14" since there is no Figure 15 drawing.

Appropriate correction is required.

Election/Restrictions

3. Applicant's election with traverse of Species 1 in the reply filed on 23 September 2008 is acknowledged. The traversal is on the ground(s) that a search and examination could be made without serious burden since all of the species are sufficiently related

and a thorough and complete search for Species 1 would necessarily encompass a thorough and complete search for species 2-4. This is not found persuasive because the species are based on independent inventions (i.e., specific embodiments) and the applicant has failed to establish that the species are obvious variants. As such, the election is proper and further the examination and analysis of the four separate species would place a burden on the examiner.

The requirement is still deemed proper and is therefore made FINAL.

Therefore, claims 9, 10 and 12-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Popovich US 6,185,016.

In regard to claim 1, Popovich discloses (see for example, Figure 1) a light source device comprising: at least two coherent light sources (24) as described in column 5, lines 4-5; and a diffraction part (26, 28 or 30) for diffracting light which is emitted from at least one of the coherent light sources so that the respective lights

emitted from the at least two coherent light sources propagate through the same optical path as shown in Figure 1.

Regarding claim 2, Popovich discloses that the optical propagation paths of the respective lights emitted from the at least two coherent light sources overlap each other on the diffraction part as shown in Figure 1. Although the prior art does not specifically teach the claimed light sources overlapping, this is seen as an inherent teaching of the device since the coherent light sources would overlap and intersect each other due to their proximity and for the device to operate as intended.

Regarding claim 3, Popovich discloses that the center axes of the optical propagation paths of the respective lights emitted from the at least two coherent light sources intersect at one point on the diffraction part as shown in Figure 1. Although the prior art does not specifically teach the claimed light sources overlapping, this is seen as an inherent teaching of the device since the coherent light sources would overlap and intersect each other due to their proximity and for the device to operate as intended.

Regarding claim 4, Popovich discloses that the at least two coherent light sources are disposed on the same submount as shown in Figure 1.

Regarding claim 5, Popovich discloses that said coherent light sources are a coherent light source that emits red light, a coherent light source that emits blue light, and a coherent light source that emits green light as described in column 4, lines 33-35 and column 5, lines 4-5.

Regarding claim 6, Popovich discloses that the light emitted from at least one coherent light source among the coherent light sources passes through the diffraction part without being diffracted by the diffraction part as described in column 5, lines 20-44.

Regarding claim 7, Popovich discloses (see Figure 1) that said diffraction part comprises a single diffraction element (26 or 28 or 30), and said diffraction element diffracts the light emitted from at least one coherent light source so that the respective lights emitted from the at least two coherent light sources propagate through the same optical path as described in column 2, lines 20-24 and column 5, lines 20-45.

Regarding claim 8, Popovich discloses that said diffraction element is further provided with a lens function as described in column 5, lines 46-53.

6. Claims 1-4 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Komma et al (hereafter "Komma") US 6,928,035.

In regard to claim 1, Komma discloses (see for example, Figure 1) a light source device comprising: at least two coherent light sources (1a, 1b); and a diffraction part (4) for diffracting light which is emitted from at least one of the coherent light sources so that the respective lights emitted from the at least two coherent light sources propagate through the same optical path as shown in Figure 1.

Regarding claim 2, Komma discloses that the optical propagation paths of the respective lights emitted from the at least two coherent light sources overlap each other on the diffraction part as shown in Figure 1.

Regarding claim 3, Komma discloses that the center axes of the optical propagation paths of the respective lights emitted from the at least two coherent light sources intersect at one point on the diffraction part as shown in Figure 1.

Regarding claim 4, Komma discloses that the at least two coherent light sources are disposed on the same submount as shown in Figures 5 and 6 and as described in column 20, lines 11-16.

Regarding claim 7, Komma discloses that said diffraction part comprises a single diffraction element as described in column 15, lines 54-67 and column 16, lines 1-2, and said diffraction element diffracts the light emitted from at least one coherent light source so that the respective lights emitted from the at least two coherent light sources propagate through the same optical path as shown in Figure 1.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Popovich US 6,185,016.

Regarding claim 11, Popovich teaches the invention as set forth above and teaches that the diffraction element is a volume hologram as described in column 5, lines 8-19, which gratings receive the respective lights emitted from the at least two

coherent light sources, and change the propagation directions of the respective lights as described in column 5, lines 20-53. However, regarding claim 11, Popovich does not teach that plural gratings are multiplexed on the volume hologram. It is notoriously well known in the holographic art to multiplex gratings to achieve the predictable result of better Bragg selectivity. It would have been obvious to one having ordinary skill in the art at the time the invention was made to multiplex plural gratings in the volume hologram of Popovich in order to provide for better Bragg selectivity and thus more control of propagation directions for the light source device.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Suguira et al US 6,130,872 and Yamada et al US 7,099,085 are considered relevant art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALESSANDRO AMARI whose telephone number is (571)272-2306. The examiner can normally be reached on Monday-Friday 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on (571) 272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ava
31 December 2008

/Alessandro Amari/
Primary Examiner, Art Unit 2872